ABSTRACT

Radio communications apparatus, radio communications system, and base station equipment that effectively utilize the network resources of both an ad-hoc network and a mobile communications network to increase the efficiency of and optimize the networks, thereby improving the communication capacity and throughput of the networks as a whole. The radio communications apparatus (UE1) employs TDD-CDMA system for communications with a base station (30) of the mobile communications network, and also employs the TDD-CDMA system, which is common to the base station, for communications with other radio communications apparatuses in the ad-hoc network, while using the same frequency band. Communications paths for communicating with the base station equipment include a first communications path for directly communicating with the base station and a second communications path for communicating with the base station equipment via another radio communications apparatus (UE2, UE3 or the like) in the ad-hoc network. The radio communications apparatus (UE1) uses one of those communications paths, which is designated by the base station equipment, to communicate with the base station equipment.